

ABSTRACT

An actuator has a columnar magnetostrictor 51, a drive coil 54, and an elastic member (sponges 52a, 52b). The columnar magnetostrictor 51 has one end defined as a fixed end and the other end defined as a free end to expand and contract along an axial direction; the drive coil 54 is arranged to generate a magnetic field to expand and contract the columnar magnetostrictor 51 by a drive current; the elastic member (sponges 52a, 52b) is disposed on each of two end faces of the columnar magnetostrictor 51; an object (plate body 7) can be actuated with expansion and contraction of the columnar magnetostrictor 51.